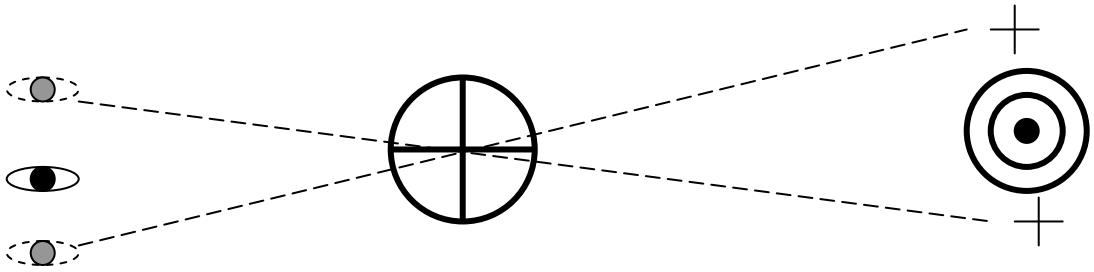
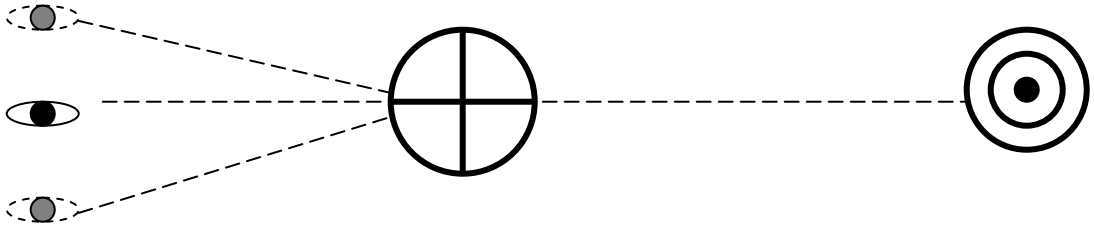
Parallax

Parallax is something that has confused many a shooter and has probably been the cause of more accuracy problems that many would care to admit. By definition parallax is the apparent movement of the reticle against a target caused by the reticle and the image of the target not being on the same focal plane.



The image above is a rough depiction of what parallax is. As the eye moves away from the axis of the scope, the reticle appears to move around the target, which can affect the shooter's accuracy if there is not a consistent cheek weld from shot to shot.



Getting parallax-free means that no matter where the eye goes in relation to the scope's axis the reticle stays fixed on the same spot on the target, greatly aiding in accuracy.

Types of parallax compensation:

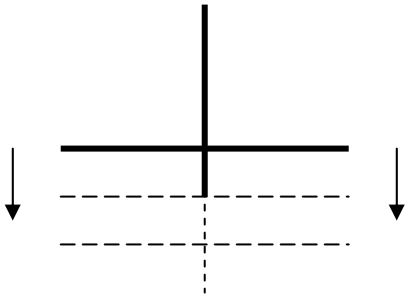
Most modern tactical scopes will employ one of two methods in order to compensate for the effect of parallax. The first method uses a side "focus" knob that is normally placed on the left side of the scope and is attached to an internal lens. The second method is an adjustable objective in which the shooter rotates the objective bell, or part of it, moving the objective lens in and out. Each method has its pros and cons but it is up to the shooter to decide which method works best for them.

Another form of parallax compensation used by some manufacturers is called fixed parallax, where the distance that a scope is parallax free is set at the factory and is for the most part, non-adjustable. Typically scopes that have fixed parallax also have a lower magnification range, as parallax will not affect them as much as a high magnification optic. Most fixed parallax scopes will have the parallax set at an intermediate distance depending on the intended purpose of the scope, such as 100 or 150 yards for a low power hunting scope.

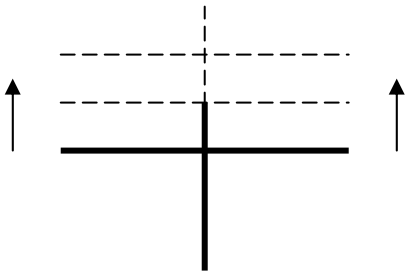
Removing parallax from the scope:

1. Look through the scope at a target and move the head up and down slightly without moving the rifle.

2. If the reticle seems to bounce downwards then you have to turn the knob for a closer distance setting. If the reticle appears to bounce up then the knob must be turned to a setting for a farther distance.



Adjust for closer distance



Adjust for farther distance

3. Continue to move the head up and down slightly until there is no movement of the reticle against the target. The scope is now parallax free at that distance.

Note: Sometimes, however this is not always the case, the image clarity will also be best when there is no parallax.